

In interpreting the malformation just described, I venture to follow a suggestion of Dr. Günther, and regard the bilateral symmetry of the dentition as merely obscured by a partial subdivision of two of its elements. The three outer rows of teeth on each side (II, III, IV) are normal and approximately symmetrical. The first lateral row of one side must thus have become subdivided; and as the large mesial teeth are decidedly unsymmetrical and do not quite occupy the middle part of the dentition, their extremities on the abnormal side also seem to have been detached. Indeed, it will be noticed that if the first two of the abnormal lateral rows (*O b*, *O c*) could be connected with the very broad teeth, the latter would be precisely median; and the manner in which the length of the teeth of the second of these series varies with the differences in the length of the broad teeth seems to prove that the homology denoted by the lettering is correct. The three rows marked *I a*, *I b*, *I c*, taken together are exactly equal in breadth to the first row of the opposite side, and may thus be regarded as its equivalent.

No specimen hitherto described appears to exhibit malformation equal to that of this unique dentition; but it may be added that Sir Richard Owen* has already noted the subdivision into two parts of the first lateral series of teeth in the East-Indian *Rhinoptera javanica*.

XXXV.—On the Genus *Theatops*. By R. I. POCOCK,
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[Plate XVI. figs. 6-10.]

WHILST reading in the 'Entomologia Americana,' vol. iii. no. 4, a paper entitled "The Scolopendridæ of the United States," by Lucien M. Underwood, Ph D., my attention was attracted on page 65 by a footnote which suggested to me the advisability of publishing the present paper. This footnote I quote verbatim:—

"The genus *Theatops* has had a strange history, and after all its vicissitudes may as well be consigned to oblivion. It was first described by Say (1821) as *Cryptops postica*, from Georgia and East Florida. Newport in 1844 established the

* 'Odontography,' p. 46, pl. xxv. fig. 2.

genus *Theatops* on type specimens sent by Say to Leach and deposited by him in the British Museum. Newport says 'it approaches *Cryptops*, but differs from that genus in the distinctness of the ocelli and in the possession of labial teeth.' Gervais, in the fourth volume of 'Aptères,' 1847, reunites it to *Cryptops*, and yet adds: 'On devra très-probablement la réunir aux véritables Scolopendres.' Wood, in 1862, and later, in 1865, quotes Newport's description, stating that he never saw a specimen of it. Latzel (1880), in the first part of his 'Myriopoden der Oesterreichisch-Ungarischen Monarchie,' makes it a probable synonym of *Scolopendra*; while Kohlrausch (1881) enumerates it as a valid species of *Theatops* in his 'Gattungen und Arten der Scolopendriden.' It thus appears that Say and Newport are all who saw specimens, and their statements are opposed to each other in regard to the position of the eyes. It will probably never appear again; at least it is not necessary to include it in future lists."

In the above-quoted passage the only inaccuracy with regard to matter of fact occurs in the statement referring to the number of specimens sent by Say to Dr. Leach. There appears to have been but one, for apart from the fact of there being but one at the present moment preserved in the British (Natural-History) Museum, Newport says his "description is taken from a specimen."

With this exception Dr. Underwood is correct in all that he asserts with reference to the past history of *Theatops*; but the object that I have at present in view is to prevent the fulfilment of his prophecy concerning the future probably in store for this genus by showing that, so far from being consigned to oblivion by exclusion from future lists, the name *Theatops* of Dr. Newport must not only be included, but must, in addition, take in these lists the place that has hitherto been assigned to the name *Opisthemege* of Dr. Wood.

With the object, then, of settling once and for all the question concerning the systematic position of "*Theatops postica*," about which, as Dr. Underwood clearly shows, so much diversity of opinion exists, I have reprinted word for word the two descriptions to which all this diversity of opinion is traceable, and have described the type specimen of this form as accurately as is under the circumstances possible.

Say (Journ. Acad. Nat. Sci. Philad. vol. ii. pp. 111, 112, 1821), in the following words, describes the species under discussion:—

“CRYPTOPS (Leach).

“Anterior margin of labium not denticulated; eyes obsolete; posterior pair of feet longest, basal joint unarmed.

“*Cryptops postica*.

“Terminal segment of the body longest; posterior feet very short and robust.

“Inhabits Georgia and E. Florida.

“Body rufous, paler beneath, punctured; segments with two impressed longitudinal lines above and a deeply impressed one beneath; ultimate segment longer than the two preceding ones conjunctly, with two obsolete impressed abbreviate lines at the base and an intermediate more distinct continued one. Posterior feet remarkably robust, hardly longer than the ultimate segment; nail remarkably robust, as long as the two preceding joints conjunctly.

“A very remarkable species, distinguished at once from all others by the very thick and short posterior pair of feet, the nails of which cross each other and are much used by the animal in its defence.”

Of this species one specimen was, according to Newport, sent by Say to Dr. Leach, and by him it was placed in the British Museum.

In 1844, Newport examined this specimen, and published in the *Trans. Linn. Soc.* xix. p. 409, the following description of it:—

“Genus THEATOPS, Newp.

“*Ocelli* distincti. *Antennæ* breves, subulatæ, 17-articulatæ. *Segmentum cephalicum* truncatum subimbricatum; margine labiali denticulato. *Pedum postremorum* articulo magno, obconico, abbreviato. *Pedum* paria 21. *Appendices anales laterales* obtusæ.

“This genus is perfectly distinct in the form of the head and the short antennæ from the true *Scolopendra*, in the structure of the respiratory organs from the *Heterostominae*, and in the number of legs from *Scolopendropsis*; while it approaches *Cryptops*, but differs also from that genus in the distinctness of the ocelli and in the possession of labial teeth.

“1. *Theatops postica*.

“Aurantiaca, ocellis inconspicuis lateralibus, dentibus 8 minutis,
Ann. & Mag. N. Hist. Ser. 6. Vol. i.

segmento postremo maximo elongato quadrato lateribus rotundato medio profunde sulcato margine posteriore transverso, pedibus postremis brevibus crassis rotundatis attenuatis; articulo basali brevissimo conico. Long. unc. $\frac{8}{10}$.

“*Hab.* In Georgiâ Floridâque Orientali (v. in Mus. Brit.).

“The mandibles are short, thick, and have a distinct basal tooth; the dental plates are elongated and widely separated; the teeth eight, minute but distinct. The basal joint of the posterior pair of legs much shorter than the second, which is twice as long as the succeeding joints. The lateral anal appendages deeply punctured. Preanal seale flat, with a median longitudinal sulcus and scattered punctures, with the margin straight.”

It will be noticed at once from a perusal of these two descriptions (1) that the statements of Say and Newport concerning the labial teeth are absolutely contradictory; (2) that Newport can scarcely be called consistent in applying to the same features two words so different in meaning as “distinct” and “inconspicuous;” and (3) that although the latter author asserts that *Theatops* approaches *Cryptops*, yet, to judge from his description of it, the former genus is more nearly allied to other genera of Scolopendridæ (e. g. *Cormocephalus*) than it is to *Cryptops*.

In our treatment of this genus there are two obvious alternatives before us—to conclude (1) that the specimen described by Say was different from the specimen described by Newport, or (2) that one of or both these authors gave erroneous descriptions of the same specimen.

Now, in addition to the discrepancies existing between the two descriptions, it may be urged in favour of the first alternative that the only evidence to show that the specimen in the British Museum is Say’s type is Newport’s assertion to that effect, and the presence upon the pin transfixing this specimen of a ticket upon which is written in Dr. Leach’s handwriting “*Cryptops posticus*, Say, N. America.”

Each naturalist must form his own opinion as to the value of this evidence, and small blame can be attached to one who trusting to the accuracy of Say as a describer prefers to regard the “*posticus*” of that author as a species of the genus *Cryptops*. But if this be so the type specimen has disappeared, and no American collector has, so far as I know, come across a form agreeing with the description of it.

Taking, then, these last facts into consideration it will certainly greatly simplify matters if the second alternative be

adopted. In support of this it can be shown (1) that Say's description applies well to Newport's specimen in almost every point; (2) that the only point in which it does not apply is his statement about the absence of the labial teeth; (3) that Newport's words with regard to the eyes are ambiguous and misleading, and have been wrongly interpreted by subsequent authors.

Therefore all that is required for the adoption of this second alternative (*i. e.* that Newport redescribed Say's type) is the assumption that Say overlooked the labial teeth.

This may well have been so; for it seems quite likely that he was so accustomed to associate the absence of eyes with the absence of labial teeth that, noting in this case the absence of the former, he without examination took for granted the absence of the latter.

For the sake of convenience therefore I shall assume that Say and Newport described the same specimen.

Whatever conclusion, however, be arrived at with regard to this point, the truth of the following statement is beyond all question:—The genus *Theatops* (Newp.) was recharacterized in 1862 and again in 1865 (Trans. Amer. Phil. Soc. xiii. p. 169) by Dr. Wood and named *Opisthemea*.

That this is so may be demonstrated by comparing the description of *Opisthemea* taken by Dr. Meinert (Proc. Amer. Phil. Soc. xxiii. p. 207) from Dr. Wood's own specimens with the following description, which I have taken from the type specimen of the genus *Theatops*, which has been preserved in the British Museum ever since the days of Newport.

Genus THEATOPS, Newport.

1844. *Theatops*, Newport, Trans. Linn. Soc. xix. p. 410.

1862. *Opisthemea*, Wood, Journ. Acad. Nat. Sci. Philad. v. p. 35.

Capitis lamina laminam dorsi primam partim protegente.

Lamina basali partim manifesta.

Oculis nullis vel evanidis.

Antennis ad basim incrassatis, ad apicem attenuatis; articulis proximis glabris, reliquis breviter hirsutis.

Pedum maxillarium sterno integro, in laminas denticulatas antice producto; articulo proximo dente basali instructo.

Tarsis tibiisque plerumque calcare armatis; tarsis plerumque articulo unico constantibus.

Segmento anali segmentis præcedentibus majore.

Pleuris analibus truncatis; maxima ex parte protectis.

Pedibus analibus maximis, valde incrassatis, articulis quinque constantibus; ungue magno, arcuato armatis.

Segmento corporis septimo spiraculis haud instructo.

Spiraculis utrinque novem.

The possession of but one dried specimen has rendered it impossible for me to give as complete a generic description as is desirable. The characters presented by the mouth-parts I have been unable to determine, and owing to damage to many of the limbs I have been unable in every instance to note the entirety of their tarsi and their spine-armature.

Yet, in spite of these deficiencies, it must, I think, be admitted by every one, from a comparison of those characters that are given, that the descriptions of *Theatops* and *Opistheme-ga* have been founded upon specimens which are generically identical.

That Dr. Wood suspected the likelihood of this is evident from his question, "Is it possible that Mr. Newport is mistaken as to the possession of eyes?"

Undoubtedly most of the mistakes that have been made with regard to *Theatops* are referable to Newport's unlucky expressions "ocelli distincti" and "ocellis inconspicuis lateralibus." For in addition to the doubt raised by the difference of meaning between the two adjectives "distinct" and "inconspicuous," it will be noticed that the sentence "ocellis inconspicuis lateralibus" might mean one of two things, either "inconspicuous eyes on each side" or "an inconspicuous eye on each side."

From the facts of the case it is only fair to presume that Newport meant the latter. But most authors seemed to think that he meant the former; and being familiar with the four distinct ocelli upon each side of the head in *Scolopendra*, they very naturally imagined that Newport was referring to similar structures when using the word "ocelli" in connexion with *Theatops*.

Now, although it is certain that in *Theatops* no distinct ocelli such as are found in *Scolopendra* are to be observed, yet there is upon each side of the head of the type specimen of the former genus a distinct and well-defined area, which occupies the position corresponding with the position of the eyes in *Scolopendra*.

This area appears as a somewhat oval whitish patch, differing only in colour from the substance composing the rest of the head-plate. Upon the patch of the left side of the head immediately behind the joint of the antenna there is to be noticed a small brown spot, darker than the substance of the head-plate. No corresponding spot occurs upon the right side.

No doubt these two whitish patches, which are probably rudimentary eyes, are the features to which Newport applied the words *ocelli distincti* and *ocellis inconspicuis lateralibus*.

Assuming this to be the case, his statements become intelligible, for when examined with a lens of low power the head appears to be furnished upon each side with a single ocellus.

Although Dr. Wood in his descriptions of *Opisthemea postica* and of *Op. spinicauda* makes no mention of the presence in these species of any eye-structures resembling those described above, yet Dr. Meinert, when characterizing the genus *Opisthemea*, remarks: "Oculi nulli vel evanidi." But since the latter author omits to state in which of the species described by him the eyes are "evanidi," it is fair to presume that he attaches no specific value to the features presented by these organs.

It is certainly to be regretted that a genus composed of species in which the eyes are either absent or rudimentary should be known by a name so inappropriate as *Theatops*. Yet the law of priority compels its adoption, and one's regret is perhaps to a certain extent lessened by the satisfaction derived from abolishing a name so ill-formed and so ill-sounding as *Opisthemea*.

Theatops postica (Say).

1821. *Cryptops postica* Say, Journ. Acad. Nat. Sci. Philad. ii. pp. 111, 112.
 1844. *Theatops postica*, Newport, Trans. Linn. Soc. xix. p. 411.
 1862. *Opisthemea postica*, Wood, Journ. Acad. Nat. Sci. Philad. v. p. 35.
 1886. *Opisthemea crassipes*, Meinert, Proc. Amer. Phil. Soc. xxiii. p. 209.

Dorsal plates ochraceous; head-plate castaneous; antennæ, ventral plates, and legs testaceous.

Head, body-segments, and anal legs strongly punctured.

Antennæ consisting of 17 segments.

Distal segments of the antennæ more or less moniliform and covered with short hairs. Basal segments bare.

Prosternal plates of the maxillary sternum almost in contact; each armed with three small obtuse teeth. Basal tooth small, obtuse and simple.

Dorsal plates, except the first and last, bisulcate; the first marked in front with a median longitudinal sulcus, which behind bifurcates and marks off with the posterior margin of the dorsal plate a triangular area. Dorsal plates, except the last, with simple margins.

Head-plate without sulci.

Ventral plates marked with a central longitudinal depression, the last elongated, with converging lateral margins,

rounded posterior angles, and a slightly concave posterior margin.

The dorsal plate of the anal segment quadrate, with straight margins, raised lateral borders, and a conspicuous median longitudinal sulcus. On each side the dorsal plate descends so as to form the lateral portion of the segment and so as to be separated by but a narrow space from the ventral plate.

The pleuræ of the anal segment appearing in the narrow space between the dorsal and ventral plates, extending behind slightly beyond the margin of the ventral plate, but not beyond the margin of the dorsal plate; not armed with spines; thickly punctured.

Tibiæ and tarsi of most of the legs armed below with a strong spur; claws of legs mostly armed.

Anal legs very thick, punctured, without spines, in contact; the inner surface of the three proximal segments flattened; the upper inner margin of the proximal segment raised.

Claw of anal leg unarmed.

Length about 20 millim.

I have had no opportunity of examining the type specimen either of *Op. postica*, Wood, or of *Op. crassipes*, Meinert. But the descriptions of these two species are so much alike and are so applicable to *Theatops postica*, Newport, that I have without hesitation regarded the three specific names as being referable to but one form.

Dr. Meinert suggests that *Op. spinicauda*, Wood, may be synonymous with *Th. postica*, Newport; but if the figure and description of the former species are to be trusted, the two must still be considered distinct.

EXPLANATION OF PLATE XVI. FIGS. 6-10.

Fig. 6. Anterior portion of the body of *Theatops postica* (Say), seen from above.

Fig. 7. Head of ditto, seen from below.

Fig. 8. Anal segment of ditto, seen from above.

Fig. 9. The same, seen from below.

Fig. 10. The same, seen from the side.